

partially blocked by mud, though a hole was left large enough for the female to put her whole head out. The nest contained a single egg, much like many of those of *Anthracoceros*, and in colour a dull, very dirty fawn-brown. The texture is very coarse, even for a Hornbill's egg, and the surface is minutely pitted all over. The egg measures  $1''\cdot87 \times 1''\cdot37$ .

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XXXII.—Notes on some Birds obtained at Kalaw, in the Southern Shan States. By Major G. RIPPON.

KALAW is a small village on the western edge of that part of the Southern Shan States which is called the Myelat, in the Hsamonghkan State. Its latitude is about  $20^{\circ} 40'$  N., and its longitude about  $96^{\circ} 40'$  E.

Kalaw is about 4500 feet elevation above the sea, but many small peaks round it, rising out of the plateau, reach a height of more than 5000 feet. At Kalaw itself there is a good deal of cultivation at the proper season. When I was there, however, in April last (1895), all the fields were dry, although a stream, which could have been used for irrigation, was flowing through them. Several spurs run out from the main plateau towards the low country to the west. Those near Kalaw have an elevation of from 4000 to 4500 feet, and are mostly covered with mixed jungle, while the higher knolls and ridges rising from the plateau are generally covered with pine-trees, and the difference of bird-life on the two is very marked.

I did not collect below 4000 feet, and seldom so low as this, which may account for the omission of Barbets and Woodpeckers, of many of which I could recognize the calls when I stood on the spurs looking into the valleys below. No birds met with beyond a radius of about five miles from Kalaw have been included in this paper, and I got few more of any interest until I had gone about 80 miles further east. The inclusion of familiar Burmese water-birds, shot or observed at a swamp about 16 miles east of Kalaw, and again at Fort Stedman, on the Inlè lake, appears to be useless.

I have inserted in the present paper the names of a few

species which Mr. E. W. Oates procured at Kalaw, and which I was not fortunate enough to observe myself. These bring up the total number of birds to 75.

1. *CORVUS MACRORHYNCHUS*, Wagl.

The Jungle-Crow occurs at Kalaw, whereas *C. insolens* is absent. This latter reappears, however, further east, at Fort Stedman, at 3000 feet.

2. *PICA RUSTICA* (Scop.).

Scarce, but more plentiful further east.

3. *UROCISSA OCCIPITALIS* (Blyth).

Very common; the first I saw were bullying a pair of *Dryonastes sennio* which had commenced to build in a small bush.

4. *GARRULUS LEUCOTIS*, Hume.

One specimen obtained.

5. *PARUS MINOR*, Temm. & Schleg.

All the birds shot by me resembled the specimen procured by Davison in the Salween district ('Fauna of B. India,' Birds, vol. i. p. 48).

6. *ÆGITHALISCUS MANIPURENSIS*, Hume.

Common.

7. *MACHLOLOPHUS SPILONOTUS* (Blyth).

8. *DRYONASTES SANNIO* (Swinhoe).

Very plentiful, tame and amusing.

9. *POMATORHINUS NUCHALIS*, Tweedd.

Observed by Mr. Oates.

10. *MYIOPHONEUS EUGENII*, Hume.

One specimen procured.

11. *LIOPTILA MELANOLEUCA* (Blyth).

12. *LIOPTILA CASTANOPTERA* (Salvad.).

Very plentiful; perpetually calling; has a very pretty note; when one bird is heard, another generally answers it.

13. *ZOSTEROPS SIMPLEX*, Swinhoe.

14. *PTERUTHIUS AERALATUS*, Tick.

15. *CHLOROPSIS HARDWICKII*, J. & S.

16. *PSAROGLOSSA SPILOPTERA* (Vig.).

Observed by Mr. Oates.

17. *HYPSIPETES CONCOLOR*, Blyth.

18. *ALCURUS STRIATUS* (Blyth).

19. *MOLPASTES NIGRIPILEUS* (Blyth).

Kalaw appears to be a paradise for Bulbuls; their notes are heard everywhere.

20. *XANTHIXUS FLAVESCENS* (Blyth).

21. *OTOCOMPSA EMERIA* (Linn.).

22. *OTOCOMPSA FLAVIVENTRIS* (Tick.).

Observed by Mr. Oates.

23. *PYCNONOTUS XANTHORRHUS*, Anders.

Observed by Mr. Oates.

24. *SITTA NEGLECTA*, Walden.

25. *DICRURUS CINERACEUS* (Horsf.).

The only Drongo I saw.

26. *PHYLLOSCOPUS SUPERCILIOSUS* (Gm.).

27. *ACANTHOPNEUSTE DAVISONI*, Oates.

Very common.

28. *CRYPTOLOPHA TEPHROCEPHALA* (Anders.).

Observed by Mr. Oates.

29. *SUYA SUPERCILIARIS*, Anders.

30. *LANIUS COLLURIOIDES*, Less.

31. *LANIUS NIGRICEPS* (Frankl.).

Observed by Mr. Oates.

32. *LANIUS TEPHRONOTUS* (Vig.).

Observed by Mr. Oates.

33. *TEPHRODORNIS PELVICUS* (Hodgs.).

34. *PERICROCOTUS SPECIOSUS* (Lath.).

35. *PERICROCOTUS BREVIROSTRIS* (Vig.).

Observed by Mr. Oates.

36. *PERICROCOTUS PEREGRINUS* (Linn.).

Very plentiful; I saw another Minivet, but failed to get it.

37. *ARTAMUS FUSCUS*, Vieill.

38. *ORIOLOUS INDICUS*, Jerd.

Observed by Mr. Oates.

39. *ORIOLOUS TENUIROSTRIS*, Blyth.

Common, with full-grown young in April.

40. *GRACULIPICA NIGRICOLLIS* (Payk.).

Observed by Mr. Oates.

41. *GRACULIPICA BURMANICA* (Jerd.).

Observed by Mr. Oates.

42. *ÆTHIOPSAR GRANDIS* (Moore).

43. *ÆTHIOPSAR ALBICINCTUS* (Godw.-Aust.).

44. *RHIPIDURA ALBICOLLIS* (Vieill.).

45. *PRATINCOLA CAPRATA* (Linn.).

46. *OREICOLA FERREA* (Hodgs.).

Observed by Mr. Oates.

47. *COPSYCHUS SAULARIS* (Linn.).

48. *UROLONCHA PUNCTULATA* (Linn.).

Common on the highroad, feeding on mule-droppings.

49. *PASSER DOMESTICUS* (Linn.).

50. *PASSER CINNAMOMEUS* (Gould).

51. *EMBERIZA PUSILLA*, Pall.

52. *MELOPHUS MELANICTERUS* (Gm.).

53. *HIRUNDO SMITHII*, Leach.

Common, and the only Swallow seen.

54. ANTHUS MACULATUS, Hodgs.

55. MOTACILLA OCULARIS, Swinh.

Observed by Mr. Oates.

56. ALAUDA GULGULA, Frankl.

The Sky-Lark of Kalaw, being of considerable size, may perhaps be assigned to *A. arvensis*.

57. ÆTHOPYGA SANGUINEPECTUS, Wald.

Common.

58. DICÆUM IGNIPECTUS (Hodgs.).

59. DENDROCOPUS CABANISI (Malh.).

Observed by Mr. Oates.

60. DENDROCOPUS ATRATUS (Blyth).

61. HYPOPICUS HYPERYTHRUS (Vig.).

62. IYNGIPICUS CANICAPILLUS (Blyth).

63. MEGALÆMA VIRENS (Bodd.).

In the hot weather the hills round Kalaw resound with the note of this Barbet.

64. CORACIAS AFFINIS, McClell.

65. CERYLE VARIA, Strickl.

66. CUCULUS CANORUS, Linn.

Calls all through the moonlight nights.

67. CUCULUS MICROPTERUS, Gould.

68. EUDYNAMIS HONORATA (Linn.).

69. COLUMBA INTERMEDIA, Strickl.

Common about the monasteries.

70. TURTUR MEENA (Sykes).

71. FRANCOLINUS CHINENSIS (Osb.).

Very common, and furnishes a welcome change of diet.

72. TURNIX TAIGOOR (Sykes).

One pair observed, flushed out of some bushes.

73. *GRUS ANTIGONE* (Linn.).

Probably a wanderer from the big swamps at Heho, 16 miles east.

74. *LOBIVANELLUS ATRONUCHALIS*, Blyth.

Two small flocks were always to be seen in the dry rice-fields near the village.

75. *GALLINAGO STENURA* (Kuhl).

Only one seen in April. They are found further east in the month of May.

XXXIII.—*Notes on some Species of the Families Cypselidæ, Caprimulgidæ, and Podargidæ, with Remarks on Sub-specific Forms and their Nomenclature.* By ERNST HARTERT.

(Plates VI. & VII.)

HAVING recently gone over the same ground as five years ago, I find that in a new list of Goatsuckers and Swifts I shall have to make quite a number of alterations and additions, and I wish to explain and to discuss some of the points in the following pages. I sincerely hope that nobody will blame me for inconsistency in cases where I do not agree with my own former conclusions. To my mind it is much more truthful and honourable to our beloved science to correct one's own mistakes, admitting that one has altered his opinions for (at least what one believes to be) the better, or that one has gained new knowledge in the course of time, than to adhere with obstinate consistency to what one has written before.

As regards my treatment of closely allied forms, it may be known to my colleagues that I am a strong advocate of the study of *subspecies*, not because I like them, but because I see that there *is* something more than species only. This is one of the revelations brought home to zoologists by Darwin and his school, and unless we close our eyes and ears against the facts before us, we must not merely admit that sharply separated species do not alone exist, but we must